WHAT IS CLAIMED IS:

1. A cylinder for an internal combustion engine comprising:

an inner surface constituting a piston-sliding surface and having formed therein at least one suction port, at least one exhaust port and at least one scavenging port which are designed to be opened and closed by the piston: and

the cylinder is made of an aluminum alloy and said inner piston-sliding surface has a plated layer deposited thereon by a PR (Periodical Reverse) method employing a high-speed polarity reversal power source.

2. The cylinder for an internal combustion engine according to claim 1, wherein said plated layer deposited on the inner piston-sliding surface is employed as a piston-sliding surface without being further subjected to grinding work.

3. The cylinder for an internal combustion engine according to claim 2, wherein said plated layer has a thickness ranging from 10μm to 20μm.

4. A method of treating an inner surface of a cylinder for an internal combustion engine, comprising the step of subjecting the inner surface constituting a piston-sliding surface of the cylinder to plating by means of a PR method employing a high-speed polarity reversal power source.

5. The method according to claim 4, wherein the step of subjecting the inner surface constituting a piston-sliding surface of the cylinder to plating by means of a PR method employing a high-speed polarity reversal power source comprises:

introducing an anode having a cylindrical configuration into the cylinder; and

at the same time, permitting a plating solution to flow from a plating solution tank to fill said cylinder with the plating solution through said anode and then to flow out of said cylinder to return to said plating solution tank, thereby permitting the plating solution to circulate between said cylinder and said plating solution tank.

6. The method according to claim 4, wherein during said plating a duration of time for passing a positive electric current is 50ms or less, and a duration of time for passing a reverse electric current is 5ms or less.

7. The method according to claim 4, wherein electrolysis for said plating is performed for a predetermined period of time by fixing a ratio of integrated positive current/integrated reverse current to a prescribed value falling within a range of 1 to 100, wherein the ratio of integrated positive current/integrated reverse current is defined as a ratio of an integrated quantity of positive current to an integrated quantity of reverse current, where the integrated quantity of positive current is equal to "a value of positive electric current multiplied by the duration of flowing the positive electric current" and the integrated quantity of reverse current is equal to "a value of reverse electric current multiplied by the duration of flowing the reverse electric current".

8. The method according to claim 7, wherein said electrolysis is performed by changing in steps the integrated positive current/integrated reverse current ratio and taking a predetermined period of time at each step.

9. The method according to claim 8, wherein said electrolysis is performed in a manner that

in a first step, said electrolysis is performed for a predetermined period of time with the integrated positive current/integrated reverse current ratio being selected from the range of 1 to 100, thereby allowing a plated layer to deposit on the inner circumferential surface of the cylinder bore;

in a second step, said electrolysis is performed for a predetermined period of time with the integrated positive current/integrated reverse current ratio being selected from a range of 0.01 to 0.9, thereby allowing said plated layer to dissolve; and

in a third step, said electrolysis is performed for a predetermined period of time with the integrated positive current/integrated reverse current ratio being selected from the range of 1 to 100 to thereby remove said plated layer deposited on said anode.